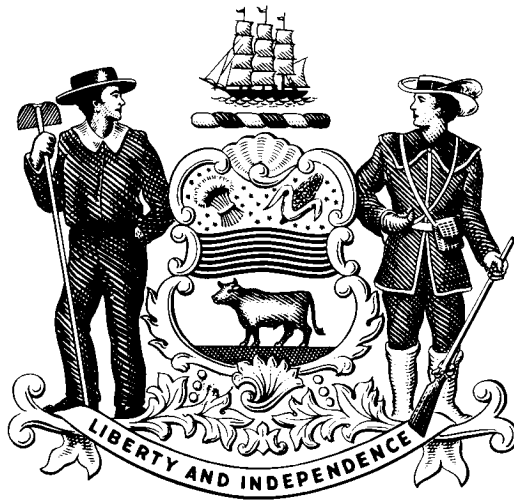


HEALTH RESOURCES MANAGEMENT PLAN



DELAWARE HEALTH RESOURCES BOARD

Federal and Water Streets
Jesse Cooper Building
P.O. Box 637
Dover, DE 19903

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INTRODUCTION

This Health Resources Management Plan is brought forth at a time when the health care environment is undergoing enormous change. While no sweeping federal legislation resulted from the recent national attention on health care reform, we are witnessing a strengthening of market forces in the health care arena. This has been prompted in large part by the growing dissatisfaction among employers with escalating health care costs. The strengthening of market forces is a major theme in the health care reform strategy adopted by the Delaware Health Care Commission.

Today's health care delivery and financing practices are quite different from those in place in 1975, when the National Health Planning and Development Act was signed into law. This Act required states to establish Certificate of Need (CON) programs, meeting federal specifications, to provide a review of proposed new health facilities and services and major capital expenditures. The law was repealed in 1986, although the vast majority of states have continued CON programs. In Delaware, CON was replaced with Certificate of Public Review (CPR) in June 1999.

With this backdrop, the Delaware Health Resources Board (Board) believes it is best served by a Health Resources Management Plan which embodies flexibility. This will allow the Board to consider changing circumstances unfettered by any allegiance to outdated rigid standards which may have seemed perfectly appropriate just a short time before. This approach magnifies the importance of the guiding principles, which appear in the next

section. In addition to these guiding principles, the Plan includes components which address medical-surgical bed needs, obstetrical bed needs, nursing home bed needs, and medical technology.

A proposal's relationship to the Health Resources Management Plan is one of seven statutory criteria used in reviewing Certificate of Public Review (CPR) applications. Other criteria are (1) the need of the population, (2) the availability of less costly and/or more effective alternatives, including the use of out-of-state resources, (3) the relationship to the existing health care delivery system, (4) the immediate and long term viability, (5) the anticipated effect on costs and charges, and (6) the anticipated effect on quality of care.

The following are important resource documents which may be of interest to the reader:

- **Healthy Delaware 2010**

Contact: Division of Public Health
Jesse Cooper Building
Federal & Water Streets
P.O. Box 637
Dover, DE 19903
Tel. (302) 739-4701

- **A Comprehensive Health Care Reform Strategy**

Contact: Delaware Health Care Commission
Thomas Collins Bldg., 1st Floor
540 S. duPont Hwy.
Dover, DE 19901
Tel. (302) 739-6906

- **Delaware Vital Statistics Annual Report**

Contact: Bureau of Health Planning & Resources Management
Jesse Cooper Building
Federal & Water Streets
Dover, DE 19901
Tel. (302) 744-4704

- **Hospital Discharge Summary Report**

Contact: Bureau of Health Planning & Resources Management
Jesse Cooper Building
Federal & Water Streets
Dover, DE 19901
Tel. (302) 744-4704

- **Population Projections (Delaware Population Consortium)**

Contact: Bureau of Health Planning & Resources Management
Jesse Cooper Building
Federal & Water Streets
Dover, DE 19901
Tel. (302) 744-4704

- **Delaware Nursing Home Utilization Statistics**

Contact: Bureau of Health Planning & Resources Management
Jesse Cooper Building
Federal & Water Streets
Dover, DE 19901
Tel. (302) 744-4704

- **Study on the Future Directions of Public Nursing Facilities**

Contact: Division of Public Health
Jesse Cooper Building
Federal & Water Streets
P.O. Box 637
Dover, DE 19903
Tel. (302) 739-4701

Statement of Purpose and Principles

Purpose

“....to assure that there is continuing public scrutiny of certain health care developments which could negatively affect the quality of health care or threaten the ability of health care facilities to provide services to the medically indigent. This public scrutiny is to be focused on balancing concerns for cost, access and quality.” This excerpt from the enabling legislation captures the purpose of the Delaware Health Resources Board (the Board).

An important tool in carrying out this purpose is the Health Resources Management Plan (the Plan). Again, quoting from the enabling legislation, the Plan shall “.....assess the supply of health care resources, particularly facilities and medical technologies, and the need for such resources.” Further, “A statement of principles to guide the allocation of resources and specific criteria and other guidance for use in reviewing Certificate of Public Review applications shall be essential aspects of the plan.”

Principles

The following general principles are intended to assist potential Certificate of Public Review (CPR) applicants in understanding the Board’s expectations and also to assist the Board itself in conducting CPR reviews, particularly in matters where specific guidelines are lacking.¹

¹ The Board will always be bound by the enabling statute (16 Del. C., Chapter 93) which statute will apply if inconsistent with this Plan.

1. The essential challenge faced by the Board is striking an appropriate balance in its consideration of access, cost and quality of care issues. Evidence that this challenge has been seriously embraced by the applicant should permeate every CPR application.
2. The problem of medical indigency is extremely complex. The Delaware Health Care Commission continues to provide leadership in this area. CPR applicants are expected to contribute to the care of the medically indigent.
3. Historically, health care delivery has too often been episodic and disjointed. Projects which support a managed, coordinated approach to serving the health care needs of the person/population are to be encouraged.
4. Given Delaware's small size and close proximity to major metropolitan referral centers, particularly in Philadelphia and Baltimore, every health care service need not be available within its borders. Potential CPR applicants are expected to take into account the availability of out-of-state resources.
5. Historically, our cost-based reimbursement system has provided little incentive for financial restraint; over-utilization has been encouraged. Revenue centers, not cost centers, were generally emphasized. Projects which reflect or promote incentives for over-utilization (including self-referral) are to be discouraged.

6. Strengthening market forces is a central theme in the health care reform strategy adopted by the Delaware Health Care Commission, a theme which is embraced by the Board. Projects resulting from or anticipated to enhance meaningful markets are to be encouraged. In the past, “competition” has often been on the basis of amenities for physicians (the medical arms race) and patients (the plushest waiting room). In meaningful markets there must be a sensitivity to elements of both cost and quality.
7. Prevention activities such as early detection and the promotion of healthy lifestyles are essential to any effective health care system. Healthy Delaware 2000 identifies a number of opportunities to improve the health status of Delawareans. The potential for a project to bring about progress in these areas will be viewed as a very positive attribute.

MEDICAL/SURGICAL BED NEEDS

The following guidelines will be used during Certificate of Public Review reviews for new, expanded or renovated inpatient medical/surgical facilities.

Guideline 1 - Additional Facilities

No additional hospitals offering medical/surgical beds shall be established in Delaware over the next five years.

Guideline 2 - Current Occupancy Rate

A hospital applying for additional medical/surgical beds shall be expected to have experienced an actual medical/surgical occupancy rate during the base year of at least 90 percent based on approved bed capacity.

Guideline 3 - Medical/Surgical Bed Projections

- a. **Hospital-Specific** - Estimated needs for medical/surgical beds shall be calculated in the following manner for each hospital in Delaware which has medical/surgical beds.

Step 1

Calculate the average daily census (ADC) in the base year by dividing the base year patient days by 365.

$$\text{BASE YEAR ADC} = \text{BASE YEAR PATIENT DAYS} \div 365$$

Step 2

Calculate the projected ADC by multiplying the base year ADC by a "population change factor" (PCF).

$$\text{PROJECTED ADC} = \text{BASE YEAR ADC} \times \text{PCF}$$

The PCF shall represent a weighted average of projected population changes in the 15-64 age category and the 65+ age category. Weights will be based on the estimated percentage of medical/surgical patient days in each of the age categories. An example, using fictitious data follows:

EXAMPLE

<u>Age Category</u>	<u>Percentage Med/Surg Patient Days</u>		<u>1990-1995 Population Change</u>		<u>Weights</u>
15-64	40	x	1.05	=	42
65+	60	x	1.10	=	<u>66</u>
					108

$$\text{PCF} = 108/100$$

$$\text{PCF} = 1.08$$

If the base year ADC as calculated in Step 1 is less than 95 percent of the ADC in the previous base year, a PCF of 1.0 will be used unless the

PCF as calculated is less than 1.0, in which case the lesser figure will be used.

Step 3

Calculate the projected bed need by dividing the ADC by an occupancy factor of .875.

$$\text{PROJECTED BED NEED} = \text{PROJECTED ADC} \div .875$$

- b. Area Projection - For New Castle County, an area need for medical/surgical beds shall be calculated using the above steps except that in Step 3 an occupancy factor of .85 will be used. Applications from hospitals in New Castle County will be evaluated in light of both hospital-specific and area bed need projections.
- c. Notes Regarding Projections
- Projections will be for five years and be updated annually, based on the most recently available calendar year utilization data (the base year).
 - Population changes will be based on the estimates and projections published by the Delaware Population Consortium, except when superseded by more recent estimates of the U.S. Bureau of the Census. Population changes used in the hospital-specific bed projections shall be calculated using the following geographic areas:

Christiana Care - New Castle County
St. Francis Hospital - New Castle County
Kent General Hospital - Kent County
Milford Memorial Hospital - Kent and Sussex Counties
Beebe Medical Center - Sussex County
Nanticoke Hospital - Sussex County

- In reviewing Certificate of Public Review applications, the bed projections should not be considered so rigidly as to hamper practicality. A reasonable number of beds beyond the projected need for a hospital should not be considered to be inconsistent with this guideline if it promotes greater efficiency. Likewise, proposed additions of a small number of beds which cannot be operated efficiently should not be construed as being consistent with this guideline even though the proposed number of additional beds is within the bed need range. Other unique circumstances may be considered as well.
- Factors other than expected population changes (these are accounted for in the projection formula), which can reasonably be expected to have a material increasing or decreasing effect on utilization should be considered in reviewing Certificate of Public Review applications.
- In reviewing Certificate of Public Review applications, if there is clear evidence that substantial inappropriate utilization is reflected in the base year patient days, this factor can be used to negate a projected need for additional beds.

- d. Application - The table below shows the bed need projections using the above methodology. The approved bed supply and the net projected shortage or surplus of beds is also shown along with the 1999 percentage of occupancy based on approved bed supply.

<u>Hospital-Specific</u>	2004 Approved <u>Bed Need</u>	Shortage <u>Bed Supply</u>	1999 <u>(Surplus)</u>	<u>% Occ.</u>
Christiana Care	510	828	(318)	53.2
St. Francis	111	298	(187)	32.4
Kent General	125	150	(25)	72.1
Milford	67	108	(41)	52.8
Beebe	114	121	(7)	74.7
Nanticoke	63	99	(36)	55.5
<u>Area-Wide</u>				
New Castle County	640	1126	(486)	47.7

OBSTETRICAL BED NEEDS

The following guidelines will be used during Certificate of Public Review reviews for new, expanded or renovated inpatient obstetrical facilities.

Guideline 1 - Additional Facilities

No additional hospitals offering obstetrical beds shall be established in Delaware over the next five years.

Guideline 2 - Obstetrical Bed Projections

- a. **Hospital - Specific** - Estimated needs for obstetrical beds shall be calculated in the following manner for each hospital in Delaware which has obstetrical beds.

Step 1

Calculate the average daily census (ADC) for the base period (most recent 3 calendar years) by dividing the base period patient days by 1095 (number of days in base period).

$$\text{BASE PERIOD ADC} = \text{BASE PERIOD PATIENT DAYS} \div 1095$$

Step 2

Calculate the projected ADC by multiplying the base period ADC by a "population change factor" (PCF).

$$\text{PROJECTED ADC} = \text{BASE PERIOD ADC} \times \text{PCF}$$

The PCF shall represent the projected population changes in the 15-44 female age category.

Step 3

Calculate the projected bed need by adding to the projected ADC the product of 1.65 times the square root of the projected ADC.

$$\text{PROJECTED BED NEED} = \text{Projected ADC} + 1.65\sqrt{\text{Projected ADC}}$$

- b. Area Projection - For New Castle County, an area need for obstetrical beds shall be calculated using the above steps except that in Step 3 the projected ADC will be increased by the product of 2.33 times the square root of the projected ADC in order to arrive at the projected bed need. Applications from hospitals in New Castle County will be evaluated in light of both hospital-specific and area bed need projections.
- c. Notes Regarding Projections
- The 1.65 and 2.33 confidence intervals are derived from statistical theory and provide for a 95 percent probability and a 99 percent probability respectively of a bed being available.
 - Projections will be for five years and be updated annually, based on utilization data for the most recently available three calendar years (the base period).

- Population changes will be based on the estimates and projections published by the Delaware Population Consortium, except when superseded by more recent estimates of the U.S. Bureau of the Census. Population changes used in the hospital-specific bed projections shall be calculated using the following geographic areas:

Christiana Care - New Castle County

St. Francis Hospital - New Castle County

Kent General Hospital - Kent County

Milford Memorial Hospital - Kent and Sussex Counties

Beebe Medical Center - Sussex County

Nanticoke Hospital - Sussex County

- In reviewing Certificate of Public Review applications, the bed projections should not be considered so rigidly as to hamper practicality. A reasonable number of beds beyond the projected need for a hospital should not be considered to be inconsistent with this guideline if it promotes greater efficiency. Likewise, proposed additions of a small number of beds which cannot be operated efficiently should not be construed as being consistent with this guideline even though the proposed number of additional beds is within the bed need range. Other unique circumstances may be considered as well.
- Factors other than expected population changes (these are accounted for in the projection formula), which can reasonably be expected to have a material increasing or decreasing effect

on utilization should be considered in reviewing Certificate of Public Review applications.

- In reviewing Certificate of Public Review applications, if there is clear evidence that substantial inappropriate utilization is reflected in the base year patient days, this factor can be used to negate a projected need for additional beds.

d. Application - The table below shows the bed need projections using the above methodology. The approved bed supply and the net projected shortage or surplus of beds is also shown.

<u>Hospital Specific</u>	2004 Approved <u>Bed Need</u>	Approved <u>Bed Supply</u>	Shortage (<u>Surplus</u>)
Christiana Care	79	57	22
St. Francis	15	24	(9)
Kent General	17	20	(3)
Milford	6	9	(3)
Beebe	8	6	2
Nanticoke	8	6	2
<u>Area-Wide</u>			
New Castle County	96	91	5

NURSING HOME BED NEEDS

The review of nursing home beds (skilled and intermediate care) represents a significant portion of review activities which are conducted pursuant to the Certificate of Public Review program. The following guidelines are instrumental in carrying out these activities.

Consistency with the projected bed needs derived from Guideline 1 shall serve as a "threshold" to be met in order for a Certificate of Public Review to be granted for additional nursing home beds. When this "threshold" is met, the favorable attributes set forth in Guideline 3 shall also be considered.

Guideline 1 - Nursing Home Bed Projections

- a. Method - Estimated needs for beds in Skilled Nursing Facilities (SNF) and Intermediate Care Facilities (ICF) shall be calculated in the following manner.

STEP 1

Calculate the average daily census (ADC) in the base year by dividing the base year patient days by 365.

$$\text{BASE YEAR ADC} = \text{BASE YEAR PAT. DAYS} \div 365$$

STEP 2

Calculate the projected ADC by multiplying the base year ADC by a "population change factor" (PCF).

$$\text{PROJECTED ADC} = \text{BASE YEAR ADC} \times \text{PCF}$$

The PCF shall represent a weighted average of projected population changes in the following age categories:

- less than 65
- 65 through 74
- 75 through 84
- 85 and over

Weights will be based on the estimated percentage of nursing home patients in the above age categories. An example, using fictitious data follows:

EXAMPLE

<u>Age Category</u>	<u>Percentage Nursing Home Admissions</u>		<u>Three-Year Population Growth</u>	<u>Weights</u>
<65	6.7	x	1.042 =	6.98
65-74	16.6	x	1.071 =	17.78
75-84	42.5	x	1.169 =	49.68
85+	<u>34.2</u>	x	1.180 =	<u>40.36</u>
	100.0			114.42

$$\text{PCF} = 114.42/100.0$$

$$\text{PCF} = 1.1442$$

If the base year ADC as calculated in Step 1 is less than the ADC in the previous year and if the percentage of occupancy in private nursing homes in the base year is less than 95%, a PCF of 1.0 will be used unless the PCF as calculated is less than 1.0 in which case the lesser figure will be used.

STEP 3

Calculate the projected bed need by dividing the projected ADC by .90 (desired occupancy rate).

$$\text{PROJECTED BED NEED} = \text{PROJECTED ADC} \div .90$$

- b. Patient Days - Total annual patient days for ICF and SNF care in both State and private facilities, for the most recent calendar year, are used. Patient days in State facilities are allocated to each county planning area based on the percentage of patient origin.
- c. Population Estimates and Projections - Population estimates and projections published by the Delaware Population Consortium are used, except when superseded by more recent estimates of the U.S. Bureau of Census.
- d. Desired Occupancy Rate - The desired occupancy rate used to project the need for ICF/SNF beds in each county planning area is 90%.
- e. Planning Areas - The three counties of Delaware (New Castle, Kent and Sussex) are used as planning areas for long term care facility needs.
- f. Margin of Error - It must be recognized that estimating future needs for nursing home beds cannot be accomplished with the precision which the use of a mathematical formula often implies. While such formulae are essential, planning requires more than mathematical calculations. Thoughtful judgement must occur. The emphasis which Delaware's Certificate of Public Review statute places on the use of the Delaware Health Resources Board seems to amply demonstrate an intent for

"reasoned conclusions." Mathematical rigidity should not inhibit such "reasoned conclusions" from providing a basis for decision making.

Therefore, at the time the bed projections are calculated, the Board may adjust the projection upward or downward by not more than ten percent, when it is concluded that the formula is likely to overestimate or underestimate bed need. For instance if capacity has been so restrained that the base year average daily census is felt to understate legitimate demand, an upward adjustment could be made. If financial access to nursing homes was threatened as a result of a change in Medicaid reimbursement policy, a downward adjustment might be in order. These are just two examples of the types of factors which might indicate an adjustment should be made.

It should also be recognized that to the extent new uses are proposed for nursing home beds, the need for such beds must be evaluated based on the merits demonstrated during the review of specific Certificate of Public Review applications. An example of such a "new use" might be the provision of skilled or intermediate nursing care for AIDS patients.

- g. Frequency of Projections - The demand for long term care beds is assumed to be responsive to several changing factors, such as the availability and accessibility of non-institutional services. Therefore, the three-year projections of long term care bed need will be revised annually, shortly after the publication of annual utilization statistics.
- h. Allocation of State Bed Supply - The State long term care facilities are located in New Castle and Kent Counties. However, as State facilities, they are available to all State residents. The supply of State beds is

therefore allocated to each of the three counties according to the percentage patient origin. A major report “Study on the Future Directions of Public Nursing Facilities,” was completed in March, 1993 by KPMG Peat Marwick. Among other things, the study recommends that the number of State beds be significantly reduced and that they be directed toward patients most difficult to serve in the private sector, such as those whose behavior require special accommodations, those with infectious diseases and others with special needs.

- i. Application - The table below shows the bed need projections using the above method. The existing supply, which includes both existing beds and beds for which Certificates of Public Review have been granted, is also shown along with the projected shortage or surplus of beds. Staffing shortages, especially when coupled with inadequate reimbursement levels, cause difficulties in placing patients despite an adequate bed supply.

	<u>2005 Need</u>	<u>Approved Supply¹</u>	<u>Shortage (Surplus)</u>
New Castle County	2758	2923	(165)
Kent County	672	634	38
Sussex County	<u>1220</u>	<u>1228</u>	<u>—(8)</u>
Totals	4650	4785	(135)

¹ Approved supply excludes State nursing home beds for which operating funds have not been budgeted.

INVENTORY

	Current # Beds	Future # Beds <u>Approved</u>
<u>New Castle County</u>		
Arbors at New Castle	120	120
Brandywine Convalescent	169	169
Broadmeadow	0	140
Churchman Village	101	101
Cokesbury Village	84	84
Forwood Manor	72	72
Foulk Manor	57	57
Foulk Manor North	46	46
St. Francis Care Center - Brackenville	104	104
St. Francis Care Center - Wilmington	100	100
Gilpin Hall	96	96
Hillside House	106	106
Ingleside Care Center	171	171
Jeanne Jugan	40	40
Kentmere	106	106
Kutz Home	90	90
Manor Care - Wilmington	138	138
Manor Care - Pike Creek	153	153
Masonic Home	23	23
Methodist Country	60	60
Millcroft	110	110
Newark Manor	67	67
Parkview Convalescent	150	150
Riverside	108	108
Shipley Manor	82	82
Stonegates	47	47
St. Francis Hospital	<u>25</u>	<u>25</u>
	2425	2565
 <u>Kent County</u>		
Capitol	120	120
Courtland Manor	78	78
Green Valley Pavilion	151	151
Silver Lake	120	120
Westminster Village	<u>61</u>	<u>61</u>
	530	530

Current

Future # Beds

	<u># Beds</u>	<u>Approved</u>
<u>Sussex County</u>		
Chancellor Care of Delmar	109	109
Country Rest	56	56
Harbor Healthcare	179	179
Harrison House of Georgetown	109	109
Lewes Convalescent	89	89
Lifecare at Lofland Park	110	110
Methodist Manor	88	88
Milford Center	136	136
Green Valley Terrace	161	161
Seaford Center	<u>124</u>	<u>124</u>
	1161	1161

<u>State Facilities</u>		
Bissell	82	82
D.H.C.I.	300	300
Governor Bacon	88	88
Carvel Unit	<u>59</u>	<u>59</u>
	529	529

<u>Allocation of State Beds</u>		
New Castle County	358	358
Kent County	104	104
Sussex County	<u>67</u>	<u>67</u>
	529	529

<u>County Totals</u>		
New Castle	2783	2923
Kent	634	634
Sussex	<u>1228</u>	<u>1228</u>
	4645	4785

PROJECTIONS ADOPTED: November 15, 2001

Guideline 2 - Favorable Attributes

The following will be seen as favorable attributes when reviewing proposed nursing home projects:

- Linkages with hospitals, clinics, home health agencies, pastoral services, social services, etc. in order to foster continuity of care.
- A willingness to serve Medicaid patients.
- Replacing facilities not conforming with current standards.
- Bed complements of at least 100 beds, especially increases in the bed complements of smaller facilities which result in at least 100 total beds.

MEDICAL TECHNOLOGY

This document is intended to assist the Delaware Health Resources Board (Board) in its review of Certificate of Public Review (CPR) applications involving new and emerging medical technology (new and emerging in terms of its use in Delaware, not necessarily from the standpoint of its scientific development). It is also intended to set out for the provider community, a set of expectations concerning the introduction and diffusion of medical technology in the state.

As used in this paper, medical technology refers to devices (major medical equipment) and procedures (health services). Pharmaceuticals are largely regulated at the federal level and while responsible for many advances in health care, are generally not of concern with respect to the Certificate of Public Review program.

As pointed out by Health Systems Research, Inc. (HSR), the consulting firm which was engaged by the Board's predecessor, the Health Resources Management Council, "Medical technology has long been a subject of concern for all members of the health care community -- providers, consumers, researchers and policy makers. Attention has focused on achieving an appropriate balance across three sometimes consistent, but oftentimes conflicting, objectives: ensuring access to innovative technology, controlling the costs associated with this new technology, and ensuring that the extent of a technology's diffusion does not adversely affect quality of care." A brief discussion of each of these concerns follows:

- Access - In today's world there is enormous pressure not only from the medical community but also the general public (as a result of extensive coverage by the mass media) to have access to the very latest in cutting-edge technology.

- Cost - Technological advances can affect costs both favorably and unfavorably. For instance, from a positive standpoint the technology might replace a more expensive procedure, eliminate hospitalization, reduce length of stay, or improve outcome so as to eliminate future direct or indirect costs of an illness. On the other hand, the technology might increase costs as a result of incurring a new capital expenditure, supplementing (rather than replacing) current technology, causing the demand for treatments that otherwise would not be considered, producing side effects that need to be treated or extending life even in cases with no expectation of improved quality of life or recovery.
- Quality - While the development of new medical technologies can generally be viewed as favorably affecting the quality of care, there is reason to believe that the excessive diffusion of certain technologies actually has a negative influence on quality. For instance, with open heart surgery, there is an association between lower surgical volumes (about 200 procedures per year) and a marked increase in mortality.

In light of Delaware's small size and close proximity to major metropolitan referral centers, particularly in Philadelphia and Baltimore, it is seen as neither necessary nor desirable that every possible health care service be available within

its borders. The introduction of a technology into the state should occur only after a careful evaluation of factors such as the following:

- Is the population to be served by the proposed technology large enough to assure a volume of patients sufficient for high quality services?
- What are the access problems associated with the continued use of out-of-state providers? How will these problems be remedied by the presence of the service in Delaware?
- What are the relative cost implications of providing the service in Delaware versus out-of-state?

The burden of proof falls on the applicant in terms of justifying the introduction of a new technology in Delaware. The mere fact that it is not available in the state is insufficient justification. On the other hand, the rigid exclusion of a technology from the state (regionalization for regionalization's sake) is also to be avoided and stances on a particular technology must be evaluated as circumstances change. In summary, technologies are to be introduced into the state only after a thorough assessment of the impact on cost, quality and access.

In conducting this assessment, the impact on cost, quality and access will be viewed from the following perspectives:

- Cost - By and large the Board is more concerned with the impact of a technology on overall health care costs than resultant charge levels

which can reflect a variety of phenomena such as cost shifting, cross subsidization among services and pricing strategies aimed at increasing market share.

- Quality - Assessing the impact on quality can be difficult because measuring quality is often quite subjective. Nevertheless, the benefits of the technology will be examined (ideally patient outcomes information will be available) along with any "critical mass" thresholds which should be met to help assure proficiency. The assurances of outside licensing and accreditation requirements can be considered also.
- Access - An evaluation of the impact on access will focus not only on the proximity of the population to the technology in question (including a consideration of transportation resources) but on a number of other dimensions of access also. These include the availability of resources, the accommodation of clients (hours of operations, appointment systems, etc.), the affordability of the services to clients, and the acceptability of the provider and the services to clients.

While it is important to consider resources in other states which are available to serve the needs of Delawareans, it is equally important to recognize the presence of recognized regional providers which are located within Delaware.

The following generic questions, which have been taken largely from the Pennsylvania State Health Plan, may be used to assist in the analysis of CPR applications. Potential applicants should prepare their applications with these questions in mind.

GENERIC QUESTIONS

Efficacy

- ◆ What does the technology do? What are the benefits of the technology?
- ◆ Has efficacy been proven by clinical trials?
- ◆ Is the technology approved by the FDA? Is it still considered experimental?
- ◆ If the FDA has approved the technology, has it done so for all manufacturers?

Program Considerations

- ◆ What other programs should or must the provider have to support the equipment or service?
- ◆ What types of manpower (physicians, technologists, etc.) are needed by this technology?
- ◆ Are sufficient manpower resources available?

Cost

- ◆ What is the capital cost of the required equipment (if any)?
- ◆ What are the other capital (renovations, interest, and depreciation) and non-capital costs (new staff) directly related to the new technology?
- ◆ What other cost in other programs will be incurred?
- ◆ Is there any potential cost savings (e.g. reduced length of stay)?
- ◆ Is Medicare, Medicaid, Blue Cross or Blue Shield, or any private health insurer reimbursing for this procedure or equipment?
- ◆ What is the overall impact on community costs, not only for Delaware but the region, if applicable, considering operating costs, utilization and charges?

System Efficiency

- ◆ What medical diagnostic groups could benefit from the technology?
- ◆ What is the estimated number of procedures needed per 100,000 population?
- ◆ In how many facilities in the state should the new technology be available?
- ◆ What priorities (i.e., teaching, research, geography) should be considered in locating the equipment?
- ◆ How could the technology be shared on a regional basis?

Institutional Efficiency

- ◆ What is the maximum number of procedures that could be performed per day, week, and year?
- ◆ To what extent will the technology: supplement existing equipment or services? replace existing equipment/services? replace staff? increase the number of support staff?
- ◆ What is the effect of the technology on current hospital utilization (inpatient and outpatient)? For example, will it reduce inpatient hospital days?

Institutional Quality

- ◆ Are there any existing national or state or Joint Commission guidelines with respect to the use of the technology?

- ◆ Is there a minimum number of procedures that should be performed per day, week, or year to maintain staff expertise?

Obsolescence

- ◆ What is the estimated productive life of the equipment?
- ◆ What new improvements can be expected in the equipment? What time frame?
- ◆ What would the impact of these new improvements be on the current equipment?
- ◆ What other technologies could be expected to replace this technology? What would be their time frames?